

WHAT IS CLAIMED IS:

1. A medical image display apparatus comprising:  
a first image output unit which outputs a real  
image of a subject that is grabbed by an image input  
5 unit;

a three-dimensional position posture detection  
unit which detects a position and posture of each of  
the image input unit and the subject and outputs  
position posture information;

10 a second image output unit which generates a data  
image of the subject based on prerecorded data of the  
subject using the position posture information output  
from the three-dimensional position posture detection  
unit, and outputs the data image; and

15 an image display unit connected to the first image  
output unit and the second image output unit, which  
superposes the real image of the subject output from  
the first image output unit and the data image of the  
subject output from the second image output unit on  
20 each other and displays a superposed image,

wherein a display area of the data image of the  
subject output from the second image output unit is  
larger than a display area of the real image of the  
subject output from the first image output unit.

25 2. The medical image display apparatus according  
to claim 1, wherein the image display unit has a first  
display area and a second display area formed around

the first display area, and the real image of the subject output from the first image output unit is displayed in the first display area and the data image of the subject output from the second image output unit is displayed in the second display area.

3. The medical image display apparatus according to claim 2, wherein the first display area and the second display area include an overlapped portion in a boundary therebetween.

4. The medical image display apparatus according to claim 1, wherein the image display unit has a first display area and a second display area formed around the first display area, and the real image of the subject output from the first image output unit is displayed in the first display area, only an outline of the data image of the subject output from the second image output unit is displayed in the first display area, and a whole of the data image of the subject is displayed in the second display area.

5. The medical image display apparatus according to claim 1, wherein the data image of the subject output from the second image output unit is a wire frame image.

6. The medical image display apparatus according to claim 1, wherein the data image of the subject output from the second image output unit is an image formed by dots.

7. The medical image display apparatus according to claim 1, wherein the data image of the subject output from the second image output unit is a surface image that is displayed through the real image of the subject output from the first image output unit.

8. A medical image display method comprising:

a step of inputting a real image of a subject from an image input unit;

a step of detecting a three-dimensional position and posture of each of the image input unit and the subject;

a step of generating a data image of the subject based on prerecorded data of the subject using the detected three-dimensional position and posture of each of the image input unit and the subject; and

a step of superposing the real image of the subject and the data image of the subject and displaying a superposed image,

wherein a display area of the data image of the subject is larger than a display area of the real image of the subject.

9. The medical image display method according to claim 8, wherein the real image of the subject is displayed in a first display area formed in substantially a central part of an image display area and the data image of the subject is displayed in a second display area formed around the first display

area.

10. The medical image display method according to claim 9, wherein the first display area and the second display area include an overlapped portion in  
5 a boundary therebetween.

11. The medical image display method according to claim 8, wherein the real image of the subject is displayed in a first display area formed in substantially a central part of an image display area,  
10 only an outline of the data image of the subject is displayed in the first display area, and a whole of the data image of the subject is displayed in a second display area formed around the first display area.

12. The medical image display method according to claim 8, wherein the data image of the subject is  
15 a wire frame image.

13. The medical image display method according to claim 8, wherein the data image of the subject is an image formed by dots.

14. The medical image display method according to claim 8, wherein the data image of the subject is  
20 a surface image that is displayed through the real image.